

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059267

Luminaire Tested: S123RDRP-S560D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059267
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S560D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

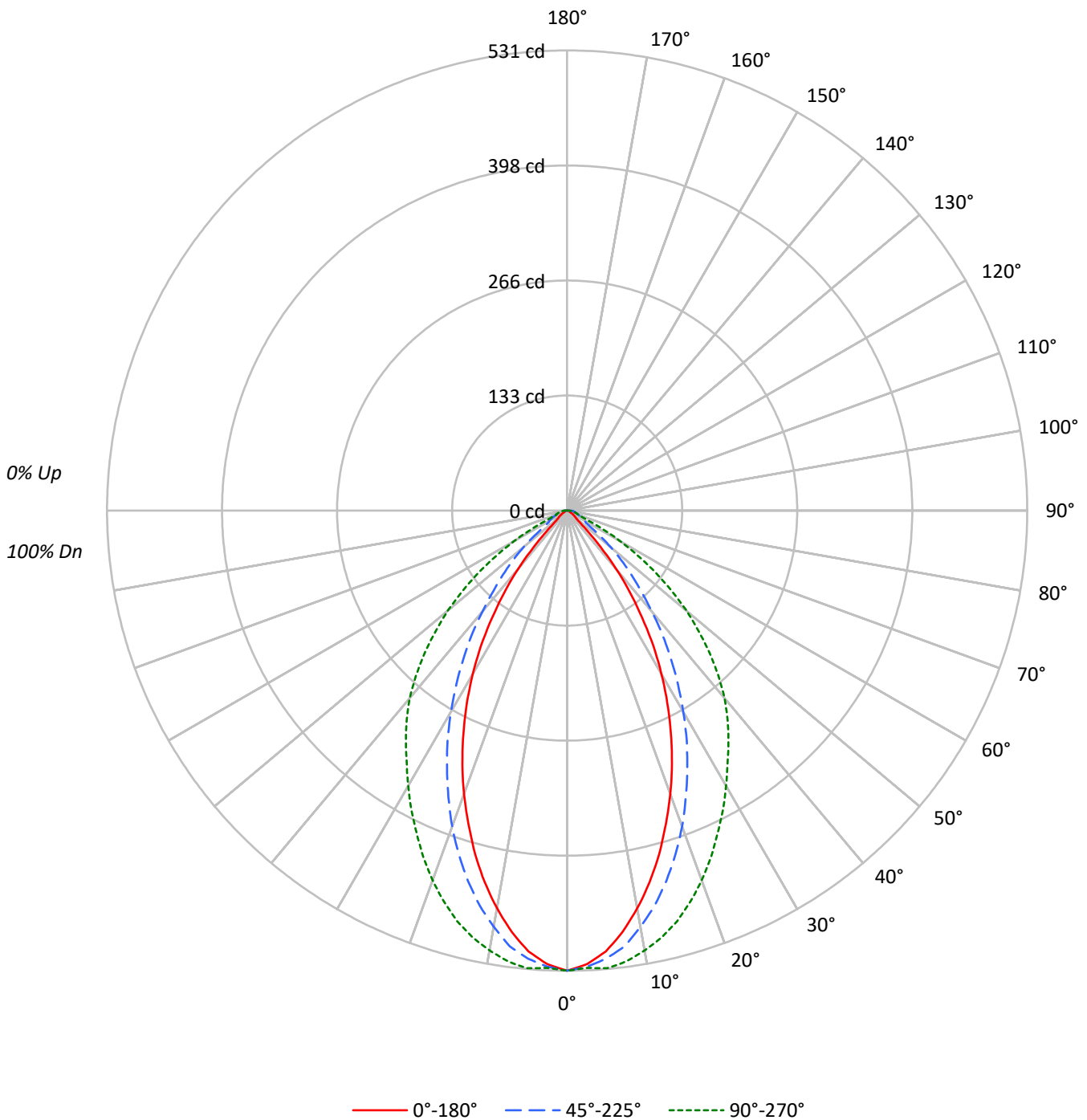
Lumens per Lamp: N/A
Luminaire Lumens: 637.4 lumens
Efficiency: N/A
Efficacy: 32.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																												
2	105	99	94	89	102	97	92	88	94	90	86	91	87	85	88	85	83	81																												
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73																												
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66																												
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60																												
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55																												
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50																												
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47																												
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43																												
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6234	6234	6234
5°	6019	6118	6250
10°	5556	5814	6147
15°	4987	5377	5962
20°	4350	4847	5674
25°	3669	4248	5324
30°	2950	3632	4975
35°	2160	2990	4650
40°	1347	2331	4330
45°	510	1737	3858
50°	243	1198	3288
55°	186	657	2543
60°	132	557	1672
65°	97	483	697
70°	96	457	457
75°	127	476	476
80°	189	568	521
85°	377	943	754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3858 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.7	7.6
10°-20°	125.0	19.6
20°-30°	154.7	24.3
30°-40°	138.7	21.8
40°-50°	90.9	14.3
50°-60°	45.5	7.1
60°-70°	17.7	2.8
70°-80°	10.0	1.6
80°-90°	6.2	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	328.4	51.5
0°-40°	467.0	73.3
0°-60°	603.5	94.7
0°-90°	637.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	637.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	511	519	519	525	530	47
15°	410	427	442	472	490	114
25°	283	301	328	375	411	129
35°	151	171	209	271	324	94
45°	31	50	105	179	232	29
55°	9	11	32	88	124	8
65°	4	10	17	23	25	4
75°	3	10	10	10	10	3
85°	3	7	7	7	6	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	530.9	530.9	530.9	530.9	530.9
2.5°	523.9	531.6	526.7	527.4	528.1
5°	510.6	519.0	519.0	524.6	530.2
7.5°	490.4	500.2	507.1	516.9	524.6
10°	466.0	477.8	487.6	505.0	515.5
12.5°	439.5	454.1	466.7	489.7	504.4
15°	410.2	426.9	442.3	471.6	490.4
17.5°	378.8	395.5	415.8	449.9	473.0
20°	348.1	364.8	387.9	426.2	454.1
22.5°	316.0	333.4	357.9	400.4	433.2
25°	283.2	300.7	327.9	374.6	410.9
27.5°	250.4	267.9	298.6	349.5	389.3
30°	217.6	235.1	267.9	322.3	366.9
32.5°	184.9	203.7	237.9	297.2	344.6
35°	150.7	170.9	208.6	271.4	324.4
37.5°	119.3	138.1	180.7	249.0	304.1
40°	87.9	108.1	152.1	227.4	282.5
42.5°	57.2	78.8	126.3	203.7	258.1
45°	30.7	49.5	104.6	179.3	232.3
47.5°	16.7	27.2	84.4	153.5	205.8
50°	13.3	15.3	65.6	131.1	180.0
52.5°	11.2	12.6	46.7	110.2	151.4
55°	9.1	11.2	32.1	87.9	124.2
57.5°	7.7	9.8	25.1	68.4	97.0
60°	5.6	8.4	23.7	50.2	71.2
62.5°	4.2	9.1	20.9	34.9	46.7
65°	3.5	10.5	17.4	23.0	25.1
67.5°	2.8	11.2	15.3	14.6	14.6
70°	2.8	10.5	13.3	12.6	13.3
72.5°	2.8	11.2	11.9	11.2	11.9
75°	2.8	10.5	10.5	10.5	10.5
77.5°	2.8	9.8	9.8	9.1	9.1
80°	2.8	8.4	8.4	8.4	7.7
82.5°	2.8	7.7	7.7	7.7	6.3
85°	2.8	7.0	7.0	7.0	5.6
87.5°	2.1	6.3	7.0	6.3	4.2
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	0.00	0.00	0.00	0.31	0.62	12.96	14.22	13.33	14.53	14.85
	3H	1.07	2.18	1.45	2.51	2.88	13.05	14.16	13.43	14.49	14.85
	4H	2.17	3.21	2.58	3.56	3.94	13.12	14.16	13.53	14.51	14.89
	6H	3.16	4.11	3.58	4.48	4.88	13.23	14.18	13.64	14.55	14.94
	8H	3.65	4.54	4.08	4.94	5.34	13.29	14.19	13.72	14.58	14.98
	12H	4.20	5.06	4.64	5.45	5.88	13.37	14.23	13.80	14.61	15.04
4H	2H	1.96	3.00	2.37	3.35	3.73	12.82	13.85	13.22	14.20	14.59
	3H	4.29	5.14	4.71	5.54	5.95	13.00	13.84	13.41	14.25	14.65
	4H	5.67	6.42	6.10	6.84	7.29	13.15	13.90	13.58	14.32	14.77
	6H	6.76	7.41	7.22	7.86	8.32	13.37	14.03	13.84	14.47	14.94
	8H	7.22	7.83	7.69	8.27	8.74	13.50	14.11	13.97	14.56	15.03
	12H	7.71	8.25	8.20	8.73	9.21	13.68	14.21	14.16	14.70	15.17
8H	4H	6.65	7.26	7.12	7.70	8.17	13.15	13.76	13.62	14.20	14.68
	6H	8.17	8.67	8.67	9.17	9.65	13.49	13.98	13.99	14.48	14.96
	8H	8.94	9.39	9.47	9.91	10.40	13.72	14.17	14.24	14.69	15.18
	12H	9.75	10.15	10.26	10.64	11.21	14.06	14.45	14.57	14.95	15.52
12H	4H	6.82	7.36	7.31	7.84	8.32	13.13	13.67	13.62	14.15	14.63
	6H	8.48	8.93	9.01	9.45	9.94	13.50	13.95	14.03	14.47	14.96
	8H	9.44	9.84	9.96	10.33	10.91	13.82	14.22	14.33	14.71	15.28